



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,378	07/17/2003	Michael David Schmitz	06975-383001	9706
26171	7590	12/01/2005	EXAMINER	
FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			TRAN, DALENA	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/620,378	Applicant(s) SCHMITZ, MICHAEL DAVID	
	Examiner Dalena Tran	Art Unit 3661	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-49 and 58-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-34, 37-44, 47, 49, 50 and 63 is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-26, 35, 36, 45, 46, 48, 58-62 and 64-72 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 3661

## **DETAILED ACTION**

### **Notice to Applicant(s)**

1. This office action is responsive to the amendment filed on 9/2/05. As per request, claims 1-5, 17-18, 23-25, 27 have been amended. Claims 51-57 have been cancelled. Claims 58-72 have been added. Thus, claims 1-49, and 58-72 are pending.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 48 recites the limitation "the interstate shield symbol" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 41 need to indicate what claim is dependent to. This office action is assumed that depend on claim 39.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 17-23, 64-65, 35, 45, 66-69, and 72, are rejected under 35 U.S.C.103(a) as being unpatentable over Behr et al. (US 2003/0156049 A1).

As per claim 1, Behr et al. disclose a method for displaying driving directions having multiple maneuvers, the method comprising: accessing maneuver information for a route from an origin to a destination, wherein the maneuver information comprises text

Art Unit: 3661

information; (see at least [0012] through [0018]; and [0033] through [0037]), presenting, as a constituent part of the driving directions, a first maneuver along the route involving a particular road; presenting, as another constituent part of the driving directions, a second maneuver along the route involving the particular road, such that the first and second maneuvers are presented consecutively among the driving directions (see at least [0099]; and [0103] through [0108]), associating a graphical road-identifying symbol (see at least [0039]; [0091] through [0094]; and [0107] to [0108]). Behr et al. do not explicitly disclose graphical road-identifying symbol with less than all presented maneuvers being presented along the route and involving the particular road. However, Behr et al. disclose in figure 39, and associate text ([0116]). In figure 39, instead of having 2 separate maneuver arms: a set of maneuver arm for the Broad-to-Main turn, and another set of maneuver arm for the Elm-to-Main turn (maneuver arms defined as graphical representation of an intersection to be traversed, see [0091]); Behr et al.'s invention generated a single combined maneuver arms display. The textual instruction can be displayed detailed in a separate 2 or 3 lines instructions, so the driver can follow step by step to avoid confusion, for example:

- Turn slight right at the corner of Broad Street and Elm Street
- Drive a short distance.
- Then turn left at the intersection of Elm Street and Main Street.

Behr et al. also disclose the driving instructions will contain several lines of text, and maneuver arms display; however, if arms are not requested the complete text instruction will be display only (see [0099]). Therefore, by combining a single maneuver arms display, but still display detail the text instruction; or if arms are not requested the

Art Unit: 3661

complete text instruction will be display only, Behr et al. capable of displaying graphical road-identifying symbol with less than all presented maneuvers being presented along the route and involving the particular road. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the system disclosed by Behr et al. by displaying the number of separate instances of the road-related graphic presented is fewer than a number of consecutive directions within the group that involve the particular road, so to transmit fewer graphical present than consecutive direction. This will reduce data transmission and storage requirements, thus, a relatively low bandwidth channel maybe used for transmitting, and the cost of transmitting will reduce if only a small amount of graphic is transmitted.

As per claim 17, Behr et al. disclose applying priority information to determine a route symbol type of several route symbol types to be associated with a maneuver of the driving directions that does not represent a first occurrence of a particular road; and associating the route symbol type with the maneuver (see [0039]; [0103] through [0113]).

As per claim 18, Behr et al. disclose displaying driving directions including the graphical road-identifying symbol associated with a maneuver (see [0012] through [0018]; [0039]; and [0087] to [0088]).

As per claim 19, Behr et al. disclose the driving directions are displayed by a system provided through an internet service provider (see [0057] to [0058]).

As per claim 20, Behr et al. disclose the driving directions are displayed by a printer associated with a client system (see [0036]).

As per claims 21-22, Behr et al. disclose the driving directions are displayed

Art Unit: 3661

by a display device associated with a client system, and displayed by a display device associated with a vehicle on-board navigation system (see [0012] through [0018]).

As per claim 23, Behr et al. disclose a method for displaying driving directions having multiple maneuvers, the method comprising: accessing maneuver information representing driving directions-for a route from an origin to a destination, wherein the maneuver information comprises textual information (see [0012] through [0018]; and [0035] through [0037]); accessing priority information that includes, for each of several route symbol types, a priority and a condition (see [0099]); determining a route symbol of the several route symbol types to be associated with a maneuver of the driving directions based on a priority associated with a route symbol type corresponding to the route symbol and the maneuver fulfilling a condition associated with the route symbol (see [0039]); and associating the route symbol with the maneuver, wherein each maneuver in the list of maneuvers for the route is associated with at most one route symbol (see [0107] through [0113]).

As per claim 64, Behr et al. disclose the priority associated with and used as a basis for determining the route symbol is a priority associated with a route symbol type corresponding to the route symbol (see [0039]; [0087] to [0088]; and [0103] through [0113]).

As per claims 65, and 72, Behr et al. disclose associating a turn route symbol with a maneuver based on a turn angle of the maneuver when the maneuver does not represent a first occurrence of a particular road having a particular road number in the list of maneuvers for the route and the maneuver does not represent a first occurrence of a

Art Unit: 3661

particular road having a particular road number in the list of maneuvers, wherein at most one route symbol is associated with a particular maneuver (see [0107] through [0113]).

As per claims 66-69, Behr et al. disclose associating the turn route symbol comprises associating a slight left turn route symbol with a maneuver that includes a turn angle of a slight left turn; associating the turn route symbol comprises associating a slight right turn route symbol with a maneuver that includes a turn angle of a slight right turn; associating the turn route symbol comprises associating a sharp left turn route symbol with a maneuver that includes a turn angle of a sharp left turn; associating the turn route symbol comprises associating a sharp right turn route symbol with a maneuver that includes a turn angle of a sharp right turn (see [0107] through [0113]).

Claims 35, and 45 are computer readable medium and system claims corresponding to apparatus claim 23 above. Therefore, they are rejected for the same rationales set forth as above.

5. Claims 2-6, 9-13, 16, 24-26, 36, 46, and 58-62, are rejected under 35 U.S.C.103(a) as being unpatentable over Behr et al. (US 2003/0156049 A1) in view of Pu et al. (US 2001/0056325 A1).

As per claims 2 and 24, Behr et al. disclose a method for displaying driving directions having multiple maneuver, the method comprising: accessing maneuver information for a route from an origin to a destination (see [0012] through [0018]; [0033] through [0037]), associating a graphical road identifying symbol that has substantially the same appearance as a road sign (see [0039]; [0087] to [0088]; and [0091] through [0094]). Behr et al. do not explicitly disclose a road number with a maneuver of the driving directions that represents a first occurrence of a particular road having the road

Art Unit: 3661

number in a list of maneuvers for the route. However, Behr et al. disclose display graphical and text instruction (see [0091] through [0094]; and [0099]). Also, Behr et al. suggests displaying of highway signs (see [0039]). It is well known that highway signs should have number to indicated what highway number is. In addition, to modify for the teach of Behr et al., Pu et al. disclose a road number with a maneuvers of the driving direction (see figure 5, and [0080]). Also, Pu et al. disclose a text and / or graphical display (see [0064]). Therefore, to combine Pu et al. and Behr et al., both system together capable of displaying a road number with a maneuver of the driving directions that represents a first occurrence of a particular road having the road number in a list of maneuvers for the route, and repeating the associating until all first occurrences of particular roads are associated with corresponding graphical road-identifying symbols. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Behr et al. by combining a road number with a maneuver of the driving directions that represents a first occurrence of a particular road having the road number in a list of maneuvers for the route to identify to the driver detailed road number information and instruction to avoid confusion.

As per claims 3 and 25, Behr et al. disclose repeating the associating until all occurrences of particular ' roads are associated with corresponding graphical road-identifying symbols (see [0103] through 0113)).

As per claims 4-5, Behr et al. disclose a method for displaying driving directions having multiple maneuver, the method comprising: accessing maneuver information for a route from an origin to a destination (see [0012] through [0018]; [0033] through [0037]), associating a graphical road identifying symbol that has substantially the same



Art Unit: 3661

appearance as a road sign (see [0039]; [0087] to [0088]; and [0091] through [0094]).

Behr et al. do not explicitly disclose a road number with a maneuver of the driving directions that represents a first occurrence of a particular road having the road number in a list of maneuvers for the route. However, Behr et al. disclose display graphical and text instruction (see [0091] through [0094]; and [0099]). Also, Behr et al. suggests displaying of highway signs (see [0039]). It is well known that highway signs should have number to indicated what highway number is. In addition, to modify for the teach of Behr et al., Pu et al. disclose a road number with a maneuvers of the driving direction (see figure 5, and [0080]). Also, Pu et al. disclose a text and / or graphical display (see [0064]).

Therefore, to combine Pu et al. and Behr et al., both system together capable of displaying a road number with a maneuver of the driving directions that represents a first occurrence of a particular road having the road number in a list of maneuvers for the route. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Behr et al. by combining a road number with a maneuver of the driving directions that represents a first occurrence of a particular road having the road number in a list of maneuvers for the route to identify to the driver detailed road number information and instruction to avoid confusion.

As per claims 6, and 26, Behr et al. disclose associating a highway shield route symbol that has substantially the same appearance as a highway road sign (see [0039]). Behr et al. do not explicitly disclose a road number with a maneuver of the driving directions that represents a first occurrence of a particular highway having the road number in a list of maneuvers for the route. However, Behr et al. disclose display graphical and text instruction (see [0091] through [0094]; and [0099]). Also, Behr et al.

Art Unit: 3661

suggests displaying of highway signs (see [0039]). It is well known that highway signs should have number to indicated what highway number is. In addition, to modify for the teach of Behr et al., Pu et al. disclose a road number with a maneuvers of the driving direction (see figure 5, and [0080]). Also, Pu et al. disclose a text and / or graphical display (see [0064]). Therefore, to combine Pu et al. and Behr et al., both system together capable of displaying a road number with a maneuver of the driving directions that represents a first occurrence of a particular highway having the road number in a list of maneuvers for the route. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Behr et al. by combining a road number with a maneuver of the driving directions that represents a first occurrence of a particular highway having the road number in a list of maneuvers for the route to identify to the driver detailed road number information and instruction to avoid confusion.

As per claims 9, and 16, Behr et al. disclose associating a turn route symbol with a maneuver based on a turn angle of the maneuver when the maneuver does not represent a first occurrence of a particular interstate having a particular road number in the list of maneuvers for the route and the maneuver does not represent a first occurrence of a particular highway having a particular road number in the list of maneuvers (see [0107] through [0113]).

As per claims 10-13, Behr et al. disclose associating the turn route symbol comprises associating a slight left turn route symbol with a maneuver that includes a turn angle of a slight left turn; associating the turn route symbol comprises associating a slight right turn route symbol with a maneuver that includes a turn angle of a slight right turn; associating the turn route symbol comprises associating a sharp left turn route symbol

Art Unit: 3661

with a maneuver that includes a turn angle of a sharp left turn; associating the turn route symbol comprises associating a sharp right turn route symbol with a maneuver that includes a turn angle of a sharp right turn (see [0107] through [0113]).

As per claims 58-62, Behr et al. disclose a particular road is a highway. Behr et al. do not disclose a particular road is an interstate. However, Pu et al. disclose a particular road is an interstate (see at least [0080]). Pu et al. do not disclose the road-related graphic. However, Behr et al. disclose providing the graphical display along with textual display travel instruction of highway signs (see [0039]). Also, it is well known that the use of picture, symbols, words, or phrases, etc. can be stored in a database, and scripts or programs display database contents based on user input. Anytime, when a user connect to Internet to request for a driving direction, the web server will connect to a database that stored picture, symbols, words, or phrases, then will output a driving direction associated with each symbol. Therefore, Behr et al. capable of display the road-related graphic has substantially the same appearance as an interstate road sign and includes a road number associated with the interstate. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the functions discloses by Behr et al. to associate an interstate shield route symbol in a list of maneuvers for the route to help the driver quickly recognize the turn or exit on the route in the driving direction.

Claims 36, and 46 are computer readable medium and system claims corresponding to apparatus claim 26 above. Therefore, they are rejected for the same rationales set forth as above.

Art Unit: 3661

6. Claims 14-15, and 70-71, are rejected under 35 U.S.C.103(a) as being unpatentable over Behr et al. (US 2003/0156049 A1) in view of Buth et al. (6898522).

As per claims 14-15, and 70-71, Behr et al. do not disclose a merge and exit route symbols. However, Buth et al. disclose associating the turn route symbol comprises associating a merge route symbol with a maneuver that includes an angle of a merge of two roads, and an exit route symbol with a maneuver that includes a turn angle of an exit from a highway or an interstate (see column 7, lines 4-35; and columns 8-9, lines 37-19). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the functions discloses by Behr et al. by combining a merge and exit route symbols to make it possible to compose navigation icons suitable for displaying route guidance for the driver.

7. Claims 7-8, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 27-34, 37-44, 47, 49-50, and 63, are allowable.

#### **Remarks**

8. Applicant's argument filed on 9/2/05 has been fully considered. Upon updated search, the new ground of rejection has been set forth as above as the result of the new amended claims.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 3661

706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136 (a).


A shorten statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE MONTHS shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136 (a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-F 6:30 AM-4:00 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3661

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
THOMAS G. BLACK  
SUPERVISORY PATENT EXAMINER  
GROUP 2600

/dt

November 26, 2005